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TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION  
EPA CONTRACT 68-01-7367

MEMORANDUM

TO: Carol J. Walsh, OSC

FROM: Freda D. Griffis *FG*  
TAT, Region IV

Karen Jarrett-Gill *KJG*  
TAT, Region IV - Memphis Office

THRU: James L. Templeton *JLT*  
TATL, Region IV

David R. Daniel *DRD*  
QA/QC Officer

SUBJECT: Report of Sampling Activities at the SAAD Site,  
Nashville, Tennessee.  
TDD 04-8703-29-1064  
TAT-04-F-00709

DATE: 15 April 1987

Introduction

This report has been prepared to satisfy the requirements of Technical Direction Document (TDD) 04-8703-29 issued to the Roy F. Weston Technical Assistance Team (TAT) by the U.S. Environmental Protection Agency (EPA). The field investigation was conducted between 16 and 27 March 1987 by the EPA Emergency Response Team (ERT) and the Environmental Emergency Response Unit (EERU) contractor. TAT members participating in this investigation were Freda Griffis and Karen Jarrett-Gill.

Sampling procedures used throughout this study were in accordance with the Environmental Services Division (ESD) Standard Operating Procedures (SOP) for field sampling and the sampling plan prepared by ERT and EERU personnel.

The overall scope of the project involved the collection of two composite tank samples and eleven water samples. A drilling contractor drilled 27 boreholes to determine extent of contamination in soil and groundwater underneath Saad Oil and surrounding areas (See Photographs, Attachment 1).

Roy F. Weston, Inc.

SPILL PREVENTION & EMERGENCY RESPONSE DIVISION

In Association with ICF Technology Inc., C.C. Johnson & Associates, Inc., Resource Applications, Inc.,  
Geo/Resource Consultants, Inc., and Environmental Toxicology International, Inc.

All samples were shipped to an EERU contract lab under proper chain-of-custody for analysis for priority pollutants and PCBs.

### Site Description

The Saad Oil Site is located at 3655 Trousdale Road in Nashville, Davidson County, Tennessee, 38204. A State Location Map is attached as Figure 1. A Site Location Map is attached as Figure 2.

The Saad Site consists of a concrete pad with a cinder block wall containing 14 tanks above ground and 1 underground tank (see Figure 3, Site Diagram). Approximately 20 feet outside the wall, on the treeline which separates the Saad property from the CSX Transportation Railyard, is a monitoring well. It is approximately 44 feet deep and is visibly contaminated with an oily substance. This well is reportedly located next to a sinkhole which was filled with debris and waste materials from the Saad Company's process. Adjacent to the Saad property exists a brick manufacturing facility.

John P. Saad & Sons, Inc. began operation of a waste oil pick-up service on Trousdale Road in 1970. Waste oil was brought to the site in tank trucks. In 1978, officials from the Tennessee Department of Water Quality Control discovered a discharge pond behind the facility which contained organic waste solvents. In 1982 the Water Resources Division of the Tennessee Department of Conservation was consulted about how the Saad waste may impact the Croft Spring nearby.

One reason this site is of continued interest to EPA is because the Croft estate, which is near the Saad property, is to be willed to the Cumberland Museum, which intends to convert the land into a children's park. The major surface water feature of the Croft estate is a spring near the homestead, which was once used as its water supply. This spring and the stream it forms would also be an important park feature, and there is public concern that children may become exposed to chemical contaminants present in the water. There are also several private wells downgradient of the site even though the entire area is on municipal water taken from the Cumberland River. These wells are mainly used for purposes other than drinking, e.g. irrigation of lawns and gardens.

### Sampling Procedures

Sampling procedures used in this investigation were planned and executed by ERT and EERU. TAT provided technical support and monitoring during on-site activities.

Collection of samples and borehole drilling began on 16 March and all samples were collected by 27 March 1987. A Site Sketch Map, coded to show borehole locations, is attached as Figure 4.

1. Tank contents sampled--On 17 March, 5 tank samples were collected to be combined for one composite sample for priority pollutant and PCB analysis by an EERU contract lab. On 18 March, three additional tanks were sampled. All tank samples were composited for a total of two samples to be shipped out for analysis.
2. Borehole Drilling/Borehole Water Samples Collected--During the investigation, 27 borehole were drilled and water samples were collected from eleven of them for priority pollutant and PCB analysis by an EERU contract lab.
3. An Auto-Skimmer was set up in an existing monitoring well to determine whether a recoverable amount of oil existed in the ground water. It was determined by Paul McNally, EERU Geologist, that a recoverable amount of oil did not exist in the groundwater.

A Table of Witnesses/Participants is included as Attachment 2. All analytical results, maps, and discussion of results will be submitted in another report by ERT and EERU.

ATTACHMENT 1

Photographs

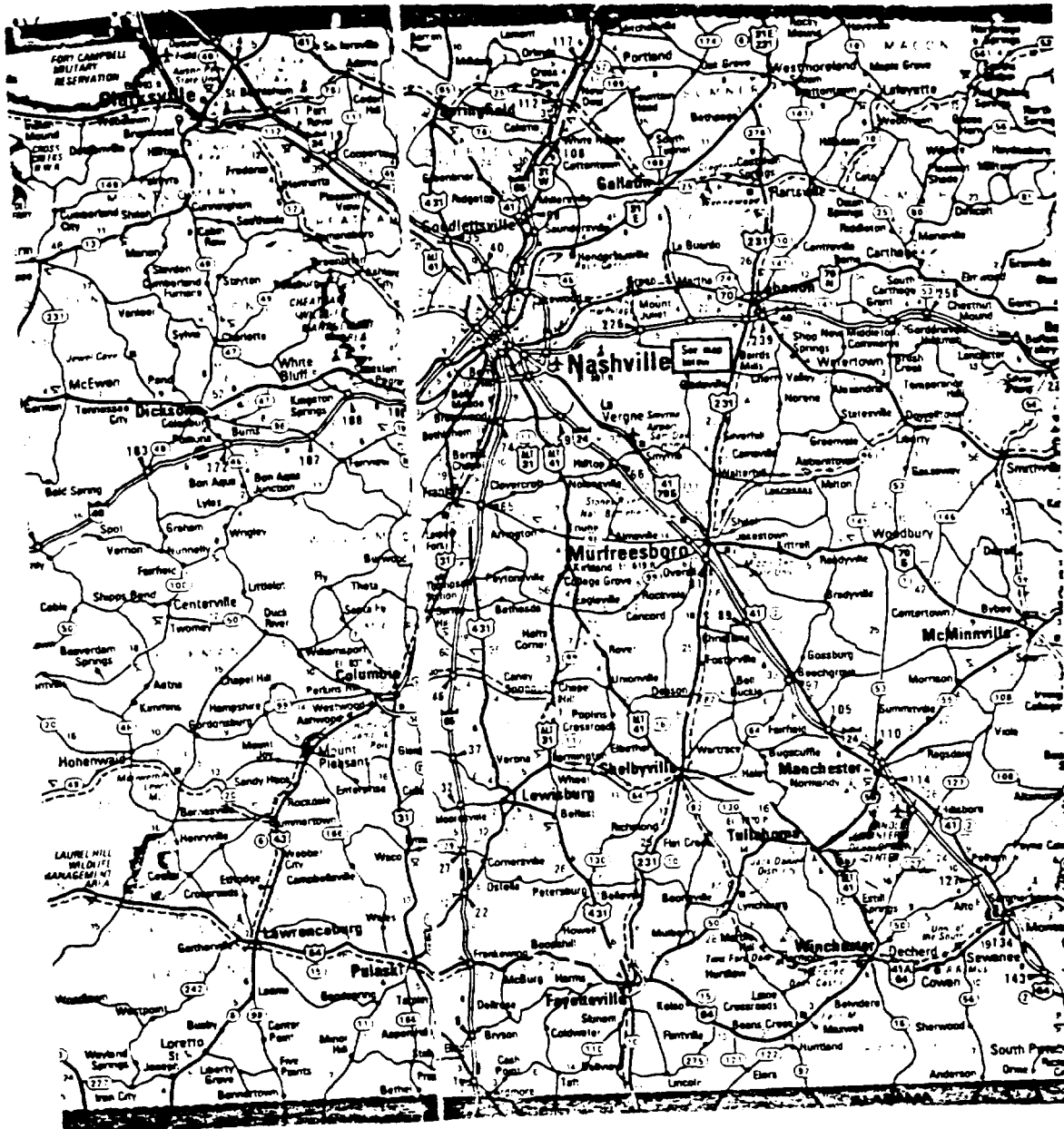


Figure 1  
State Location Map

ACTIVITY  
DESCRIPTION PA/SI

SITE The Saad Site

TDD NO. 04-8610-23 / 04-8609-02

DATE 10-30-86 BY EG

**WESTON**  
COMMUNICATIONS

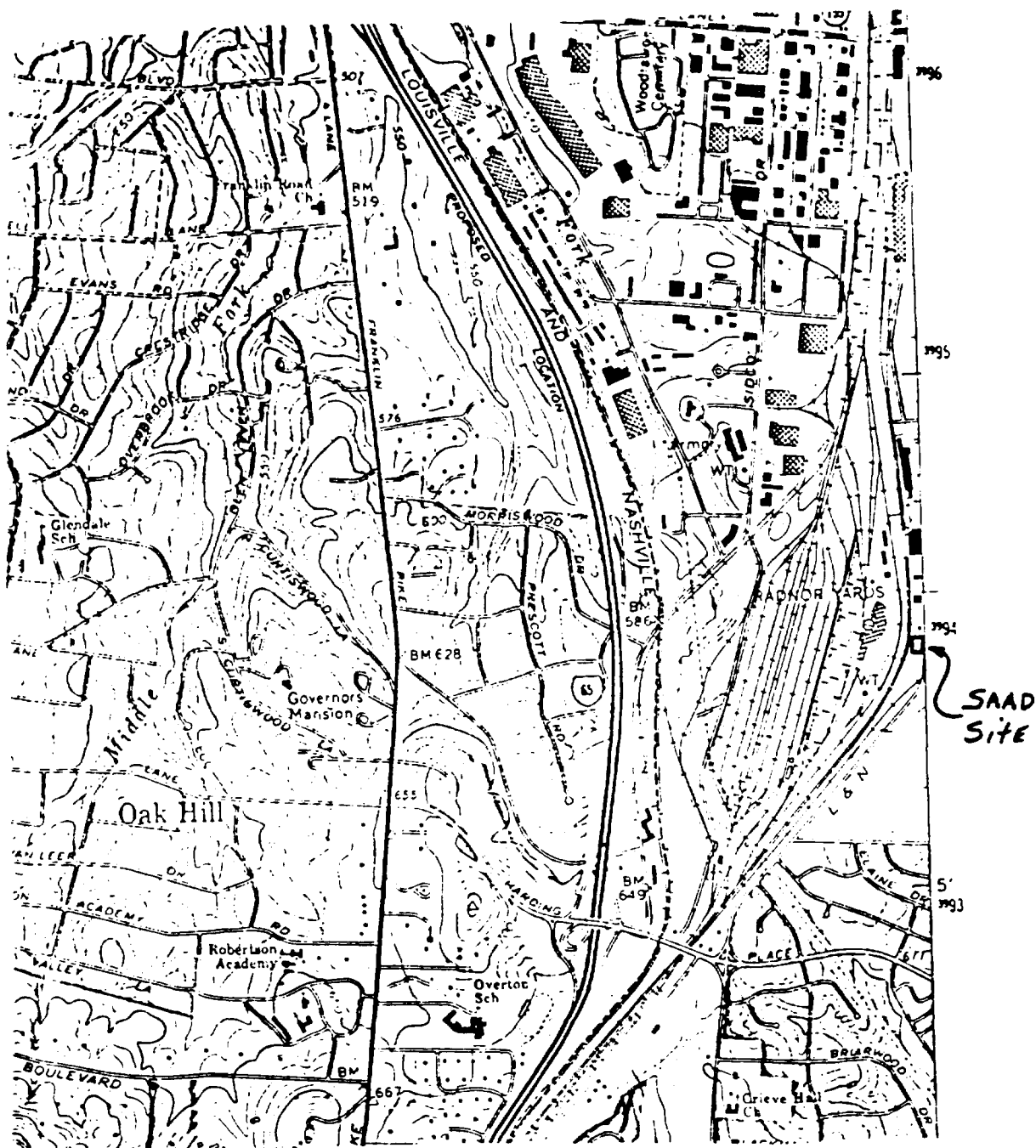


Figure 2  
Site Location Map

ACTIVITY  
DESCRIPTION

PA/SI

SITE The Saad Site

TDD NO. 04-8610-23 / 04-8609-02

DATE 10-30-86 BY FG

**WESTON**  
A WESTON COMPANY

Other Business

Cinder Block Wall

Tank Farm

Building

Tanker Truck

Tree Line

Well

55-gal. drums

Gravel Parking Area

Brick Yard

Figure 3  
Site Diagram

ACTIVITY  
DESCRIPTION

~~Saad Site Sampling~~  
PA/SI

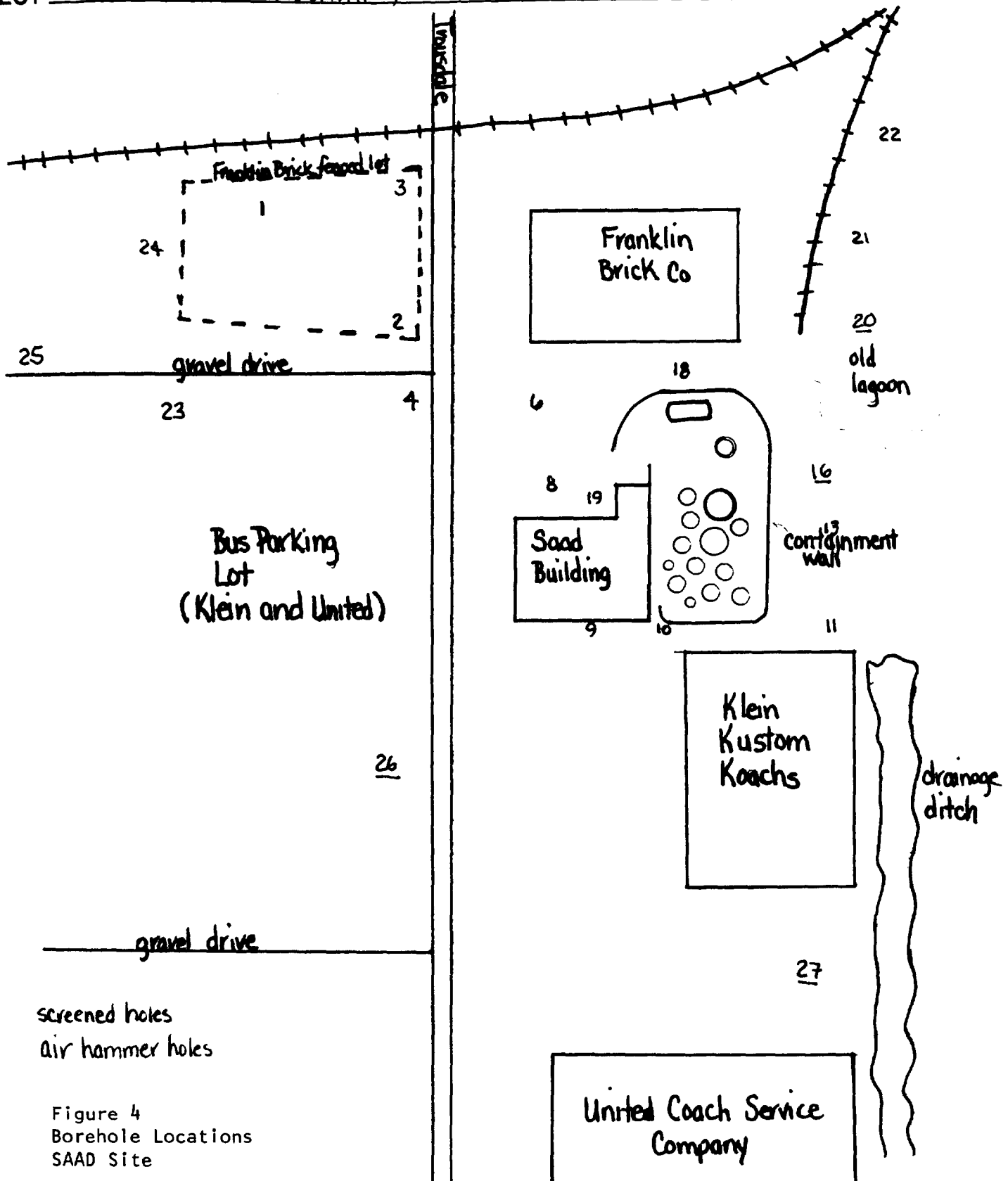
SITE Saad Site, Nashville, TN

TDD NO. 04-8609-02

DATE September, 1986 BY EG

**WESTERN**  
CORPORATION

BY KJG DATE 30 Mar 87 DIV \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 DRAWD BY \_\_\_\_\_ DATE \_\_\_\_\_ DEPT \_\_\_\_\_ W.O. NO. (Not to Scale)  
 PROJECT \_\_\_\_\_  
 SUBJECT Saad Oil Site Nashville, TN



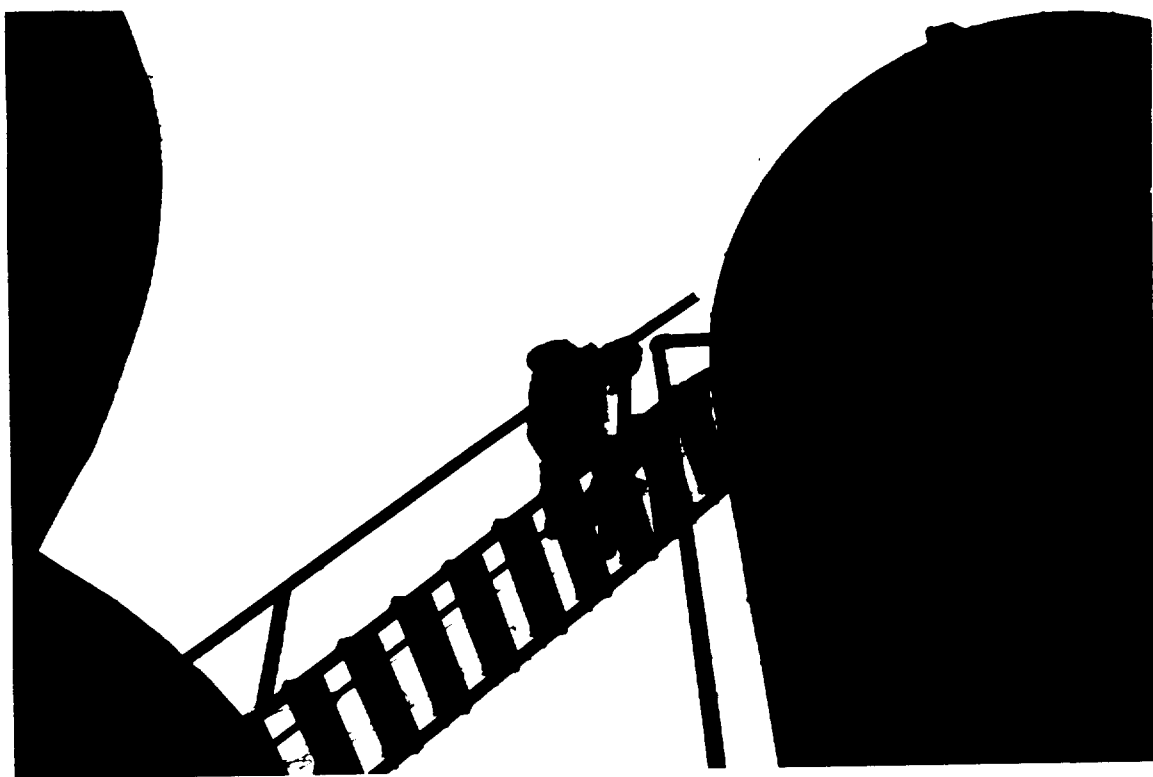
screened holes  
 air hammer holes

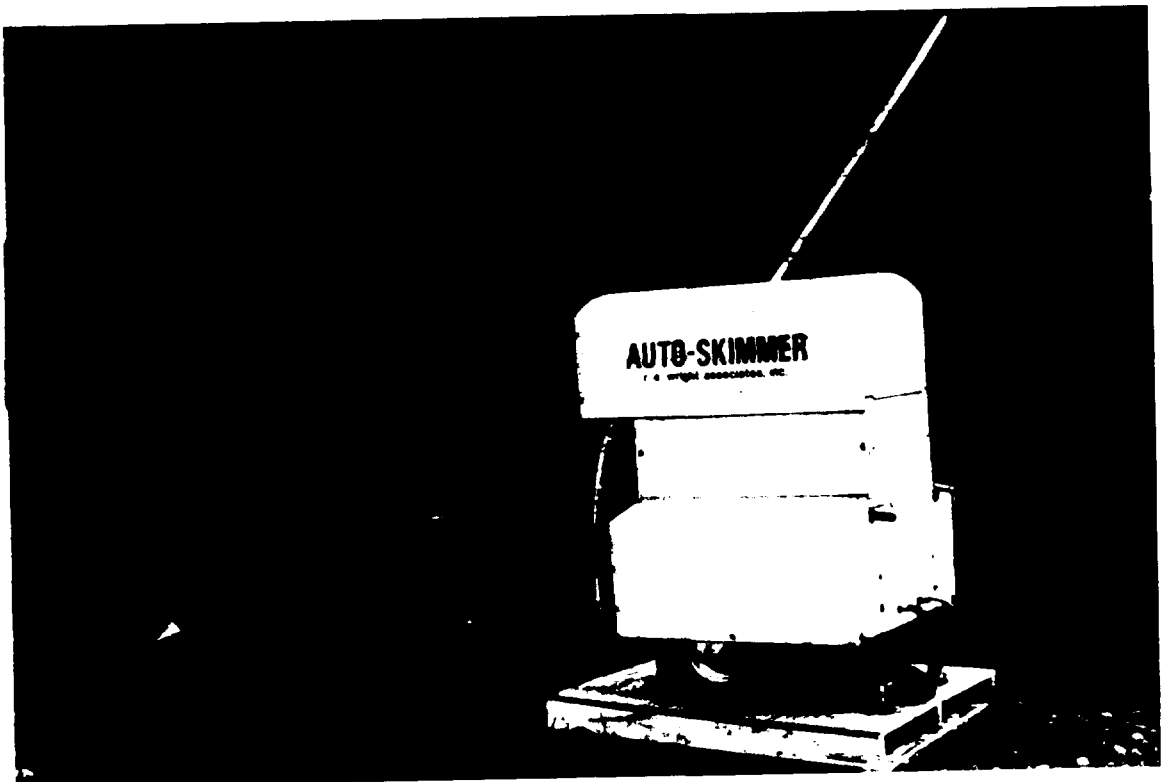
Figure 4  
 Borehole Locations  
 SAAD Site



**POOR LEGIBILITY**

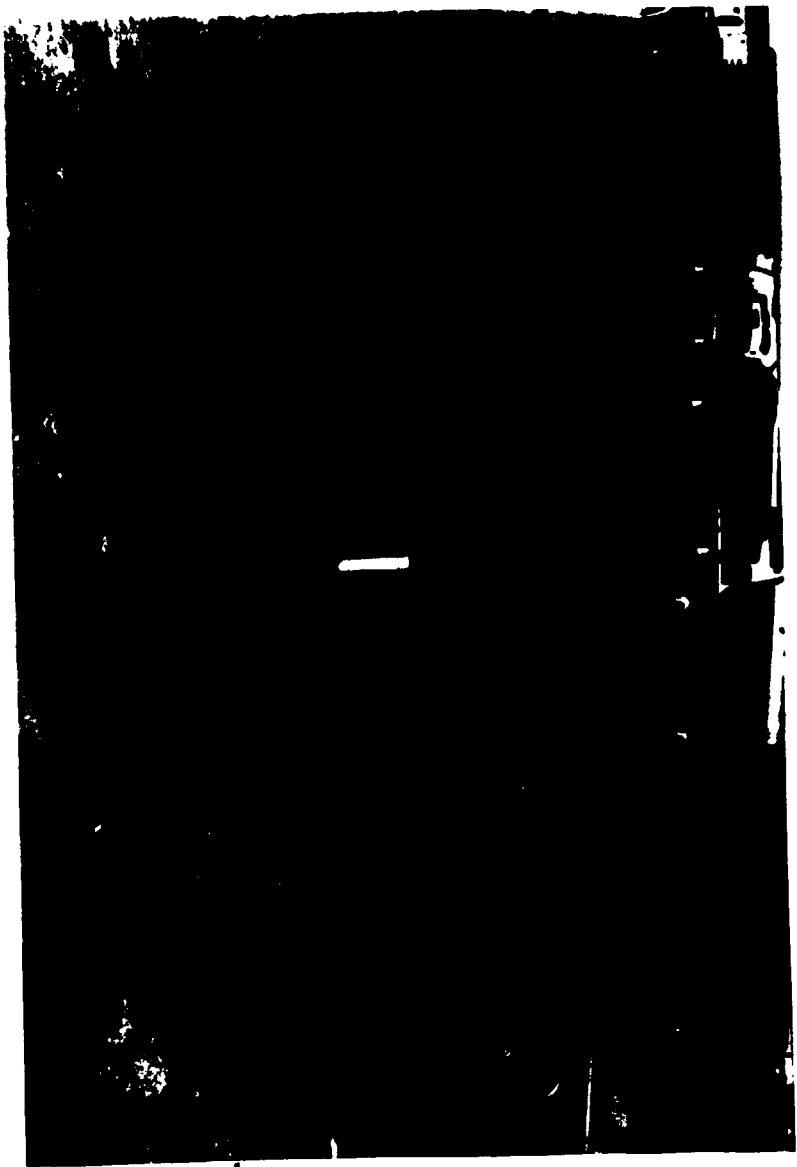
**PORTIONS OF THIS DOCUMENT  
MAY BE UNREADABLE, DUE TO  
THE QUALITY OF THE  
ORIGINAL**

















## ATTACHMENT 2

## Table of Witnesses

## EPA

Carol J. Walsh, OSC

404/347-2216

George Prince, ERT

201/321-6649

## TAT

Freda D. Griffis

404/352-4147

Karen Jarrett-Gill

901/398-6071

## EERU

Cindy Burchette, Biologist

201/906-6823

Paul Karmazinski, Geologist

201/906-6823

Paul McNally, Geologist

201/548-9660

## GENERAL QUESTIONS TO RESIDENTS

II. Are you using your well water for any purpose? If so what?

i.e. A. drinking

B. bathing, showering or swimming

C. canning

D. livestock

E. crops

If answer is no - STOP

If the answer is yes to A/B ask the following:

1. How often do you use the water for showering or swimming?
2. Have you noticed any unusual odor, color or taste with the water?
3. Give the ages of people who live in the house?
4. Have you or any member of the house noticed any unusual health problems?

If the answer is yes to item C ask the following:

1. How frequently do you use the water?
2. How do you use the water for canning?
3. Is the water boiled prior to use?

If the answer is yes to item D ask the following:

1. What kind of livestock drinks the water?
2. Are the animals generally healthy.

If the answer is yes to item E ask the following:

1. What kind of crops do you grow?
2. Are they sold commercially or grown solely for your own use?

## SPECIFIC QUSTION FOR PEOPLE WHO VOICED HEALTH COMPLAINTS IN 1979.

1. Have you had any recurrence of health problems you complained of in 1979 since you discontinued using the well water?

## QUESTIONS TO STATE

- I. Are any households or businesses in the contaminated or potential contaminated area of Silver Springs using well water? If so how many and how long?